GOVERNMENT OF INDIA
SPACE
LOK SABHA

STARRED QUESTION NO:42
ANSWERED ON:02.12.2015
Flood Early Warning System
Mahajan Smt. Poonam

Will the Minister of SPACE be pleased to state:

(a) whether the Indian Space Research Organisation (ISRO) has developed Flood Early Warning System (FLEWS) and if so, the details thereof;
(b) whether FLEWS has the ability to forecast heavy rains twenty four hours in advance and if so, the details thereof;
(c) whether warning system for snow melting and glacier lake bursts has been incorporated in FLEWS and if so, the details thereof;
(d) the details of areas where FLEWS has been deployed, State-wise; and
(e) the steps being taken by the Government to further improve the capability of the Flood Early Warning Systems?

Answer

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH):

(a) to (e) A Statement is laid on the Table of the House.

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STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY TO STARRED QUESTION NO. 42 REGARDING "FLOOD EARLY WARNING SYSTEM" ASKED BY SHRIMATI POONAM MAHAJAN FOR ANSWER ON WEDNESDAY DECEMBER 02, 2015.

(a) Yes Madam. The North Eastern Space Applications Centre (NESAC) of DOS/ISRO has developed the Flood Early Warning System (FLEWS) as a Research & Development (R&D) project in Assam State in association with Assam State Disaster Management Authority (ASDMA). FLEWS is a terrain-specific model, which employs satellite based inputs, in-situ data on rainfall and river discharge data at critical locations to provide advance information on flood events as an input to disaster preparedness.
(b) No Madam. Presently, FLEWS model is not providing heavy rainfall forecast. However, heavy rainfall forecast, on an experimental basis, is being provided by Space Applications Centre, Ahmedabad and hosted on its MOSDAC website.
(c) No Madam. Snow melting and glacier lakes bursts have not been incorporated in FLEWS model as it is developed only for the state of Assam. However, the impact of snow melt runoff is incorporated in the model through in-situ observations of river discharge.
(d) As R&D project, the FLEWS model is being used in all the flood prone districts of Assam State (25 districts), except two hill districts of North Cachar and Karbi Anglong. Further, the flood forecasting methodology developed by National Remote Sensing Centre (NRSC) of ISRO for the Godavari floodplains is transferred to Central Water Commission (CWC), Hyderabad.

(e) The Central Water Commission, Ministry of Water Resources is mandated for flood forecasts in India. ISRO undertakes studies to develop methodology for flood forecasting using space based and in-situ observations, as Research & Development. Also, ISRO provides capacity building with regard to spatial flood inundation modeling.
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